WYMONDHAM URBAN DISTRICT

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ANNUAL REPORT

for the year

1964

of the

MEDICAL OFFICER OF HEALTH

together with the

ANNUAL REPORT

of the

PUBLIC HEALTH INSPECTOR

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WYMONDHAM URBAN DISTRICT COUNCIL

THE ANNUAL REPORT OF THE MEDICAL OFFICER OF HEALTH FOR THE YEAR 1964.

Mr. Chairman, Ladies and Gentlemen,

I have the honour to present my Report on the state of the public health in this district during the year ending 31st December 1964.

INTRODUCTION

The health of a community is not easily measured. Mortality statistics have, of course, been available for many decades and conclusions have been drawn from them as to the health of the people. In 1964, the average age at death of Wymondham residents was sixty seven years which indicates a close approach to the traditional allocation of three score years and ten even though it compares rather unsatisfactorily with a life expectancy at birth in England and Wales of 68.0 years for males and 73.9 for females. However, there is more to health than long life and it could be held that the healthy person is he who keeps fit and active during his allotted span rather than he who lives a greater number of years but in indifferent health. Unfortunately there are few available statistics of sickness or morbidity and the most reliable of them, the National Insurance benefit figures, are of limited help because they apply only to employed persons and to those interruptions of positive health that cause absence from work. The notifications of infectious disease were once a reasonable index of the health of the community because so much of the sum total of the national morbidity was attributable to such illness. This, of course, is no longer true and although the section of the report on infectious diseases will show that Wymondham had an uneventful year, this fact has only limited public health significance.

A medical officer of health does not, therefore, depend only on statistics in judging the state of health of a community for which he is responsible. It is necessary to form a subjective impression and this is much helped by liaison with general practitioners and discussion as to the trend of health and disease in their patients, whilst the school and child welfare clinics offer a unique opportunity of examining the healthy as well as the sick. From these sources the conclusion is clear that health has never been better. The standard of living has continued to rise and standards of health have risen with it. Nutrition is excellent and this means that many illnesses are avoided altogether or, being contracted, are shaken off more easily. Education, too, has played a very considerable part in enabling the people to avoid disease or to co-operate successfully in the treatment of established disease. Beyond these national factors that have their bearing on health, Norfolk people have the added advantage of living in a clean atmosphere. There is a very striking contrast between the amount of chronic respiratory disease here and in the industrialized parts of Britain.

By most standards then, the state of health has been good but there is a less satisfactory side of the picture. Mention was made in the 1963 Report of the years of life lost by those who die in middle age and there has been no subsequent evidence that this important tragedy of our

times is becoming any less. The tragedy lies not only in the loss of people who are at the peak of their working lives and often involved in the maximum of family responsibility but also in the probability that many of the deaths might have been prevented. Figures are now available to show the years of working life lost by persons dying in England and Wales in 1963 between the ages of 15 and 64 years. They demonstrate that nearly half (49%) of the wasted years were due to one of three diseases or to accidents. The percentage of the total wastage that was due to each cause is as follows:-

Cancer	17%	(including 3% due to cancer of the lung and 2% due to cancer of the breast)
Bronchitis (and pneumonia)	12%	
Coronary disease	10%	
Accidents	10%	

A vast amount of research work is constantly going forward to add to our knowledge of how to prevent these deaths but it is important not only to look hopefully to the future but to consider whether our present knowledge is properly used. It is probable that the public is not very well served by the press in this respect because publicity is given to subjects of "news value" and the news value of a topic is more related to its unusual nature than to its importance. One appreciates, of course, that the press is primarily concerned with selling newspapers and not with educating the public but it remains unfortunate, for example, that accidents involving radio-activity are given exhaustive coverage, although it is now likely that they present no real hazard, whilst seven thousand annual deaths on the road receive no more than passing mention as incidents and the very occasional general comment in the editorial column. The twenty-five thousand lung cancer deaths get a good deal less publicity and the tobacco manufacturers contribute generously to the newspapers' advertising revenue.

What can the public do to reduce this loss of life insofar as our present knowledge extends? Cancer is not generally preventable but is generally curable if the diagnosis is made early. Unfortunately there is still a proportion of people who do not realize this and they sometimes keep a symptom secret for fear of having their suspicions confirmed. The common cancers of breast, stomach, bowel and uterus all lend themselves to early treatment and the outlook is then excellent. On the other hand the commonest site of all cancers is now the lung and this, together with various less important growths, is preventable. It is seen from the above figures that the latter disease is responsible for 3% of all the wasted years and it follows that the individual may smoke as hard as he is able and still expect, on chance, to die of something other than lung cancer. However, it might be held that the gamble is not the act of a responsible individual and to encourage, or even permit, a young person to start smoking is certainly a great deal less responsible.

What to do about coronary disease is less clear and various ideas, such as the use of vegetable in place of animal fat, have been rejected. However, a few things are certain -

(a) Physical activity tends to protect and the sedentary life tends to promote coronary disease.

(b) Over eating and overweight favours this disease.

(c) Coronary disease is common in communities in which the tempo of life is brisk e.g. Britain, U.S.A.; whilst it is rare in the undeveloped countries.

(d) The risk of coronary thrombosis in cigarette smokers is twice that in non-smokers.

Bronchitis, the English disease, is particularly a problem of our industrial areas and it is not intended to dwell on it. It is to be hoped that the extension of smoke control will before long have an effect on this national disgrace.

Finally, it is not for me to pontificate on the subject of accidental deaths but there would be little argument that a large proportion of them must be regarded as preventable. The England and Wales figures for 1964 (1963 in brackets) may be of interest -

Accidental deaths in the home	7,160	(7,754)
" " on the road	7,673	(6,743)
Total of accidental deaths	17,722	(17,414)

STAFF

Dr. D.F. Hadman was appointed Medical Officer of Health as from 1st January 1964, and served throughout the year.

Mr. R.F. Hudson, Senior Public Health Inspector and Surveyor served through the year, being assisted by Mr. D.C. Thompson, Public Health Inspector. The volume of work undertaken by the health inspectors increases year by year, particularly in regard to building control, and this trend will continue. The work load was also added to in 1964 by the coming into operation of the Offices, Shops and Railway Premises Act of 1963, both public health inspectors having been appointed authorised inspectors for the purposes of the Act. A junior assistant was engaged in the middle of the year and commenced duties in the Public Health Department.

VITAL STATISTICS

(a) General

The Registrar-General provides data giving, for each District, the annual number of live and still births and details of deaths by age, sex and cause. He also makes an estimate of the population and from all this it is possible to work out the following rates and these can be compared with the corresponding rates for England and Wales. However, it is sometimes unwise to draw any rigid conclusion from the comparison because certain of the local calculations depend on very small numbers. The birth and death rates, on the other hand, are based on larger numbers and can more reasonably be compared with the national rates after correction for age differences as between the district and the nation.

(b) Population

The mid-year population of Wymondham Urban District in 1964 was estimated at 6,030 compared with 5,920 in 1963.

(c) Births

There were 99 live births in 1964 - 48 boys and 51 girls. The

crude birth rate (live births per 1,000 population) was therefore 16.4 and the corrected rate 17.1. This compares with a 1963 corrected Wymondham rate of 16.1 and with a provisional rate for England and Wales in 1964 of 18.4 live births per 1,000 population.

There were 7 illegitimate births compared with 5 in 1963, and 2 in 1962.

Four infants were born prematurely and one failed to survive.

(d) Stillbirths

One was notified giving a still birth rate of 10.1 still births per 1,000 total births, this comparing with a provisional national figure of 16.3.

(e) Infant Mortality

The England and Wales infant mortality rate was again the lowest ever, being 20.0 deaths of infants under one year per 1,000 live births. Three such deaths occurred in Wymondham and the rate was therefore 30.3 deaths per 1,000 live births. One of these infants was premature and two had a congenital malformation the cause of which, in each case, being entirely unknown.

(f) Deaths

Deaths numbered 91 compared with 78 in 1963. The crude death rate was therefore 15.1 deaths per 1,000 population and the adjusted rate was 14.0. This latter compares with an England and Wales provisional rate for 1964 of 11.3 deaths per 1,000 population. It will be appreciated that in any single year only a few excess deaths will be sufficient to produce a sharp increase in the death rate. The 1964 trend is no longer apparent in 1965 and deaths in the first half of the current year number 35 against 42 in the same period of 1964.

The causes of death are listed in Table 11 and it will be seen from Table 10 that 43 pf the total of 91 deaths occurred at 75 years or more of age, a proportion of 48% which is somewhat more satisfactory than the 1963 figure of 45%. The matter of premature death and life wastage has already been discussed in general terms. What of Wymondham? It emerges that there were 21 deaths (15 men and 6 women) in the age group 15 to 65 years and the number of these attributable to the causes already discussed is as follows (1963 data in brackets).

Cancer	8	(8)
Coronary disease	4	(2)
Accidents	-	(1)
Bronchitis	1	(-)
	13	(11)

There were three accidental deaths, two on the road (and including a teenage cyclist) and one in the home. Three persons committed suicide and two young or middle aged men died of acute infection, an indication, perhaps, that infectious disease still presents an important hazard.

(g) Road Injuries Data

The following details of road accidents are made available by the Chief Constable and are included with the vital statistics for convenience.

Class of Casualty	Killed	Serious	Slight
Drivers	-	4	5
Pedestrians	-	3	7
Motor Cyclists	-	7	3
Pillion Passengers	-	3	1
Pedal Cyclists	1	1	7
Other Persons	1	3	20
Totals	2	21	43

COMMUNICABLE DISEASES

Thirty eight cases of infectious diseases were notified during 1964, the details being appended in Tables 15 and 16. It will be seen that 37 of these were of MEASLES and occurred in the early months of the year as an extension of the 1963 epidemic. The remaining notification was of acute influenzal PNEUMONIA, a case which unfortunately proved fatal.

In addition, WEIL'S DISEASE was reported in a middle aged man who had very probably had contact with rats.

No case of FOOD POISONING nor of DYSENTERY was notified for the third successive year, although one Wymondham resident contracted salmonellosis elsewhere and was kept under observation. At a time when the national incidence of these diseases of imperfect hygiene has been rising, the Wymondham experience is most satisfactory.

Epidemic nausea and VOMITING was troublesome on two occasions in the year. This illness is fortunately very mild but has a high infectivity and may involve more than half the pupils of a school in one outbreak. It is presumed to be due to a virus, although no single virus has yet been identified, and is probably spread by droplet infection. Certainly the ordinary rules of personal and food hygiene seem to offer little protection.

ENVIRONMENTAL HYGIENE

The many aspects of this subject are dealt with fully in the appended report of the Senior Public Health Inspector and the following paragraphs are intended only as a general review.

(a) Housing

The 1961 Census report is in the course of publication, part by part, and the following figures in regard to housing conditions are now available.

(i) Average number of persons per room: Wymondham 0.62
Norfolk County 0.60

(ii) Percentage of all households with:-

	No cold tap	No hot tap	No fixed bath	No waterborne sanitation	Exclusive use of all four facilities
Wymondham U.D.C.	12.3	45.1	40.7	17.2	51.8
Norfolk County	14.1	40.3	37.1	31.1	55.2
All Municipal Boroughs and U.D's.	4.7	32.6	26.2	8.1	62.7

It emerges from these figures that whilst Wymondham does not suffer overcrowding, there is nevertheless scope for the extension of modern housing amenities. There has, of course, been considerable advance since 1961 both in encouraging provision of basic housing amenities by the award of standard improvement grants and in requiring the clearance of dwellings unfit for habitation and unsuited to modernisation. In the same period a considerable length of new water main has been laid.

Modernisation of Council's own property has been proceeding well in the last four years and about 100 dwellings have been completed, leaving some 140 to be dealt with.

(b) Sewage Disposal

1964 was a year of disappointment. The capacity of the sewage works had been greatly increased in 1962 and although there had been no consequent improvement in the quality of the effluent, it was thought that this was probably due to the severe winter having set back biological activity in the filters.

As time went on it became clear that the problem was more fundamental and the following investigations proceeded throughout 1964.

(i) Examination was made of crude sewage, of sewage after sedimentation and of sewage effluent on leaving both the old and the new filtration beds. This showed firstly that the sedimentation tanks were working satisfactorily and secondly that both sets of filter beds were inefficient.

(ii) The crude sewage was found to be abnormally alkaline, doubtless due to a large content of laundry waste, and the possibility of this being damaging to the filters was investigated and rejected.

(iii) It was thought that the poor effluent might be due to soaps and detergents holding organic matter in suspension but it was shown in the laboratory that chemical coagulation was little more effective than simple settlement in reducing the amount of solid material in suspension, and the effect of soap was therefore not important.

(iv) It was demonstrated that very high concentrations of brine arrived at the works following regeneration of water softening plant at the laundries and it was again thought that the biological activity of the filter beds might be impaired thereby. However, expert advice discounted this.

(v) Apparatus was obtained to enable on the spot testing of effluent quality and the effect of arduous routine cleansing of the works was carefully observed. At the same time a device was fitted to ensure that one third of the sewage was directed to the old filters and two thirds to the new, this being the design recommendation. Once again, no significant improvement in the effluent was observed.

At the end of the year a joint meeting was held with representatives of the East Suffolk and Norfolk River Board and it was agreed that the effect of re-circulation of the effluent would be investigated but that the filters would first be closely examined for any mechanical or engineering fault. It will be known that the examination did reveal several such faults and that remedial measures are now proceeding which should, at last, produce a satisfactory conclusion.

(c) Water Supply

Council's headworks at Wicklewood supply chalk bore water to the District as well as to part of Forncett and Hemstead District.

Having been softened to approximately 10 degrees of hardness the water is of high quality. All samples examined bacteriologically were satisfactory. The fluoride concentration is low, varying from none to 0.2 parts per million, and there is therefore a clear case for adjusting the concentration to one part per million, this being the optimum level for sound dental health.

The resin in the base exchange softening plant was changed in September and subsequent performance has been extremely satisfactory.

(d) Food Hygiene and Meat Inspection

Particular attention was given to food hygiene enforcement during the early summer when the final extent of the Aberdeen typhoid outbreak was uncertain. The effort began with enquiries into the possibility of suspect corned beef having been distributed in Wymondham but none was found.

It is of interest that the Food Hygiene Regulations require lower minimum standards of hygiene in mobile shops than in conventional food premises. Since mobile trading appears to be on the increase, it is to be hoped that this anomaly will soon be removed.

(e) Public Health Nuisances

It is an important part of the duty of this Department to see that situations prejudicial to health are corrected but it is not here intended to go into the matter in detail. However, one problem needs attention. Intensive animal husbandry exists in close association with other dwellings and it appears that in many cases no planning objection can legally be raised to further development of this sort. Nuisance is usually concerned with smell or fly breeding and it is likely that this will prove an increasing problem. The Rural District Councils Association expressed concern, during the year, about this matter and it is greatly to be hoped that suitable power will soon be vested in the planning authorities.

HEALTH EDUCATION

It will be clear from my introductory remarks that I see the present day threat to the public health as stemming from a faulty mode of life rather than from the old whipping horse, the faulty environment. If this is true, then a public health authority should be at least as concerned with health education as with environmental control. It is therefore with regret that I have to report that no progress was made in this field in 1964.

CONCLUSION

I am grateful to the Chairman of the Council and the Chairman and members of the Public Health Committee for their encouragement throughout the year.

I would like also to acknowledge the co-operation of the Clerk of the Council, and the Public Health Inspectors as well as all those other members of the staff at Wymondham and the Norwich office who have always shown themselves eager to contribute to the care of the public health.

I have the honour to be,

Your obedient servant,

D.F. Hadman.

Local Health Office,
Aspland Road,
Norwich, NOR 19S.

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Table 1. GENERAL STATISTICS

Area (in acres)	79,740
Estimated Resident Population	6,030
Rateable Value	£172,773
Sum produced by a Penny Rate	£720

Table 2. LIVE BIRTHS

	Males	Females	Total
Legitimate	46	46	92
Illegitimate	2	5	7
Totals	48	51	99

Live Birth Rate per 1,000 of Estimated Resident Population = 16.4.

Table 3. STILL BIRTHS

	Males	Females	Total
Legitimate	-	-	-
Illegitimate	-	1	1
Totals	-	1	1

Still Birth Rate per 1,000 Total Births = 10.1.

Table 4. TOTAL BIRTHS

	Males	Females	Total
Live	48	51	99
Still	-	1	1
Totals	48	52	100

Table 5. INFANT DEATHS

(a) Infant Mortality (Deaths of Infants under 1 year)

	Males	Females	Total
Legitimate	3	-	3
Illegitimate	-	-	-
Totals	3	-	3

Infant Mortality Rates:

Total = 30.3 (per 1,000 live births)
Legitimate = 30.4 (per 1,000 legitimate births)
Illegitimate = 0.0 (per 1,000 illegitimate births)

(b) Neo-Natal Mortality (Deaths of Infants during first four weeks)

	Males	Females	Total
Legitimate	2	-	2
Illegitimate	-	-	-

Neo-Natal Mortality Rate (per 1,000 live births) = 20.2

(c) Early Neo-Natal Mortality (Deaths of Infants under 1 week)

	Males	Females	Total
Legitimate	2	-	2
Illegitimate	-	-	-

Early Neo-Natal Mortality Rate (per 1,000 live births) = 20.2

(d) Perinatal Mortality (Still births and deaths under 1 week)

	Males	Females	Total
Legitimate	2	-	2
Illegitimate	-	1	1

Perinatal Mortality Rate (per 1,000 total births) = 30.0

Table 6. ILLEGITIMATE BIRTHS

Males - 2 Females - 5 Total - 7 = 5% of Total Live Births.

Table 7. MATERNAL DEATHS (Including abortion) = NIL

Maternal Mortality Rate (per 1,000 total births) = NIL

Table 8. DEATHS (All ages)

Males.	Females	Total
46	45	91

Crude Death Rate (per 1,000 of Estimated Resident Population) = 15.1

Table 9. CAUSE OF DEATH OF INFANTS UNDER ONE YEAR

Cause	Males	Females	Total
Pneumonia	1	-	1
Prematurity	1	-	1
Congenital abnormalities	1	-	1

Table 10. NOTIFICATIONS OF DEATHS RECEIVED DURING THE YEAR (According to Age Groups)

	Males	Females	Total
Under 4 weeks	2	-	2
4 weeks and under 1 year	1	-	1
1 " " 5	-	-	-
5 " " 15	-	1	1
15 " " 25	1	-	1
25 " " 35	1	-	1
35 " " 45	2	-	2
45 " " 55	7	-	7
55 " " 65	4	6	10
65 " " 75	13	10	23
75 and over	15	28	43
Totals	46	45	91

Table 11. CAUSE OF TOTAL DEATHS (Registrar-General)

Cause	Males	Females	Total
10. Malignant neoplasm, stomach.	4	1	5
11. Malignant neoplasm, lung, bronchus.	3	-	3
14. Other malignant and lymphatic neoplasms.	2	3	5
15. Leukemia, Aleukemia.	1	-	1
17. Vascular lesions of nervous system.	7	11	18
18. Coronary disease, Angina.	12	7	19
19. Hypertension with heart disease.	1	1	2
20. Other heart diseases.	4	10	14
21. Other circulatory diseases.	1	3	4
22. Influenza.	1	-	1
23. Pneumonia.	1	1	2
24. Bronchitis.	2	-	2
25. Other diseases of respiratory system.	1	-	1
31. Congenital malformations.	1	-	1
32. Other defined and ill-defined diseases.	4	4	8
33. Motor vehicle accidents.	-	1	1
34. All other accidents.	-	1	1
35. Suicide.	1	2	3
Totals	46	45	91

Table 12. SUMMARY OF BIRTH AND DEATH RATES

	1958	1959	1960	1961	1962	1963	1964
Live Births (per 1,000 pop)	(97)	(73)	(85)	(91)	(70)	(92)	(99)
Wymondham U.D.	16.6	12.5	14.5	15.4	11.8	15.5	16.4
Area 5.	14.9	13.7	14.1	14.2	13.9	15.2	14.9
England & Wales (provisional)	16.4	16.5	17.1	17.4	18.0	18.2	18.4
Still Births (per 1,000 total births)	(1)	(2)	(2)	(Nil)	(2)	(Nil)	(1)
Wymondham U.D.	10.2	26.7	23.0	0.0	27.8	0.0	10.1
Area 5.	9.9	19.9	20.7	8.9	21.4	29.1	6.7
England & Wales (provisional)	21.2	20.7	19.7	18.7	18.1	17.3	16.3
Crude Deaths (per 1,000 pop)	(62)	(75)	(67)	(54)	(73)	(78)	(91)
Wymondham U.D.	10.6	12.8	11.4	9.2	12.3	13.2	15.1
Area 5.	12.1	12.4	11.8	12.4	12.1	12.2	12.9
England & Wales (provisional)	11.7	11.6	11.5	12.0	11.9	12.2	11.3
Infant Mortality (per 1,000 live births)	(Nil)	(3)	(Nil)	(Nil)	(Nil)	(3)	(3)
Wymondham U.D.	0.0	41.1	0.0	0.0	0.0	32.6	30.3
Area 5.	8.3	25.4	14.1	9.0	14.5	11.6	20.5
England & Wales (provisional)	22.5	22.0	21.7	21.4	21.4	20.9	20.0

NOTE: 1. Figures in brackets are the actual numbers for Wymondham U.D.
2. Area 5 comprises Depwade and Loddon R.Ds. and Diss and Wymondham U.Ds.

Table 13. DEATHS DUE TO CANCER - Wymondham U.D.

	1958	1959	1960	1961	1962	1963	1964
Number of deaths.	14	17	7	10	15	13	13
Percentage of total deaths.	22.6	22.6	10.4	18.5	20.5	16.5	14.3

Table 14. CANCER DEATHS DURING LAST FIVE YEARS - Wymondham U.D.

Year	Male			Female		
	Total Deaths	Total Cancer Deaths	Cancer of Lung	Total Deaths	Total Cancer Deaths	Cancer of Lung
1964	46	9	3	45	4	-
1963	45	9	5	33	4	-
1962	37	11	2	36	3	-
1961	31	5	1	23	5	-
1960	38	5	-	29	2	-
Totals	197	39	11	166	18	-

Table 15. NOTIFICATION OF INFECTIOUS DISEASES (EXCLUDING TUBERCULOSIS) According to Age Groups - Wymondham U.D.

	Under 1	1-4 yrs.	5-14 yrs.	15-24 yrs.	Over 25	Total
Scarlet Fever	-	-	-	-	-	-
Measles	-	10	27	-	-	37
Whooping Cough	-	-	-	-	-	-
Pneumonia	-	-	-	-	1	1
Totals	-	10	27	-	1	38

Table 16. INCIDENCE OF INFECTIOUS DISEASES (EXCLUDING TUBERCULOSIS) DURING LAST FIVE YEARS - Wymondham U.D.

	1960	1961	1962	1963	1964
Scarlet Fever	7	7	6	9	-
Measles	51	131	1	105	37
Whooping Cough	-	1	3	2	-
Pneumonia	-	-	-	-	1
Erysipelas	2	-	-	1	-
Dysentery (Sonne)	13	-	-	-	-
Food Poisoning	1	4	-	-	-
Puerperal Pyrexia	-	-	-	1	-
Poliomyelitis (Paralytic)	1	-	-	-	-
Infective Jaundice	-	-	1	1	-
Encephalitis (post inf.)	-	-	-	1	-
Totals	75	143	11	120	38

Table 17. DETAILS OF NEW CASES OF TUBERCULOSIS FOR LAST FIVE YEARS - Wymondham U.D.

		1960	1961	1962	1963	1964
Pulmonary						
	Male	3	-	2	1	-
	Female	1	-	-	-	-
Non-Pulmonary						
	Male	-	1	-	-	-
	Female	-	-	-	1	-
Wymondham U.D.	Total	4	1	2	2	-
Area 5.	Total	13	12	8	7	7

Table 18. DIPHTHERIA IMMUNISATION

The following is the number of primary immunisations and booster injections given during the last five years in respect of Area 5.

Year	Primary Injections			Booster Injections	
	Under 1	Total Under 5	Age 5-14	Under 5	Age 5-14
1964	204	486	28	125	342
1963	244	547	97	94	861
1962	155	448	28	48	304
1961	295	598	157	89	766
1960	377	472	314	27	1,233

Table 19. VACCINATION AGAINST SMALLPOX

Vaccination of children (under five years of age) during the last five years resident in the District and Area 5, are shown in the following table.

	Wymondham U.D.					Area 5.				
	1960	1961	1962	1963	1964	1960	1961	1962	1963	1964
Number of live births registered.	85	91	70	92	99	567	556	550	601	592
Number of vaccinations recorded (0-4 years).	58	51	66	16	32	508	458	420	222	276
Percentage vaccinated.	68	56	94	17	32	89	82	76	37	46

Table 20. VACCINATION AGAINST POLIOMYELITIS

The following is the number of primary immunisations and boosters given in Area 5 since the scheme commenced. Table A shows the numbers immunised with the Salk vaccine (by injection) and Table B those given the Sabin vaccine (Oral) which became generally available in mid-1962.

(A) Salk:

Year	Primary			Booster (3rd)			Booster (4th)
	Age 0-4	Age 5-14	Age 15+	Age 0-4	Age 5-14	Age 15+	Age 5-12
1964	24	5	1	30	5	-	5
1963	31	4	26	42	6	31	-
1962	234	37	151	294	115	914	27
1961	601	535	2068	427	228	824	3017
1960	397	227	853	660	566	1636	-
1959	593	677	2220	1377	3261	864	-
1958	1648	3159	154	32	1284	2	-
1957	197	1115	-	-	-	-	-
1956	40	121	-	-	-	-	-

(B) Sabin:

Year	Primary			Booster (3rd - after 2 Salk)			Booster (4th)	
	Age 0-4	Age 5-14	Age 15+	Age 0-4	Age 5-14	Age 15+	School Age	Others
1964	554	129	22	5	1	-	785	-
1963	424	22	15	66	2	-	483	-
1962	197	131	1359	230	312	1077	426	-

Table 21. IMMUNISATION AGAINST WHOOPING COUGH

The following is the number of whooping cough primary immunisations recorded in Area 5 during the last five years.

Year	Under 1	Age 1-4	Age 5-14	Total
1964	202	276	8	486
1963	244	301	5	550
1962	149	291	12	452
1961	291	300	26	617
1960	368	100	124	592

Table 22. IMMUNISATION AGAINST TETANUS

The following is the number of tetanus immunisations recorded in Area 5 during the last five years. Immunisation against this disease was included in the County Council's scheme in September 1958.

Year	Primary				Booster		
	Age Under 1	Age 1-4	Age 5-14	Age 15+	Age 1-4	Age 5-14	Age 15+
1964	204	282	136	124	131	418	65
1963	242	306	504	219	100	284	44
1962	152	312	725	399	50	103	37
1961	282	329	1651	580	73	80	63
1960	374	198	1823	691	22	56	87

Table 23. B.C.G. VACCINATION

This is given at the age of 13 years to all school children who do not react to the tuberculin skin test. Number of skin tests and subsequent B.C.G. vaccinations in Area 5 in the last five years is recorded.

Year	Number Skin Tested	Number Positive	Number B.C.G. Vaccinated
1964	474	68	382
1963	472	97	352
1962	586	146	434
1961	426	104	303
1960	544	91	429

PUBLIC HEALTH INSPECTOR'S ANNUAL REPORT

FOR THE YEAR 1964

To the Chairman and Members of the
Lymondham Urban District Council.

Mr. Chairman, Ladies and Gentlemen,

I beg to submit my Annual Report as Public Health Inspector for the year ended 31st December, 1964.

STAFF

Your Public Health Inspector holds in addition the appointments of Highway Surveyor, Building Surveyor, Water Engineer and Petroleum Inspector and has the services of an assistant (qualified as a Public Health Inspector) and 2 Male Clerks.

HOUSING

Slum Clearance

During the year under review 4 families, comprising 10 persons were displaced from unfit houses and rehoused by the Council.

Proceedings under the Housing Act, 1957.

Number of undertakings given by owners and accepted by the Council to carry out work to make houses fit for habitation	-
Number of Demolition Orders made	3
Number of Closing Orders made	-
Number of houses made fit	-
Number of houses demolished	12

Informal Proceedings under Housing and Public Health Acts.

Number of informal notices served	5
Number of informal notices complied with	5

Very little action was taken during the year to deal with sub-standard houses. There are still houses very near the town centre without proper drainage and with no piped water within the house. A determined effort is required to rehouse people from these worn out dwellings and to clear the sites for the erection of new dwellings.

New Housing Progress.

During the year 65 dwellings were completed, 14 by the Council and 51 by private enterprise.

The position with regard to post-war housing at the 31st December 1964 was that a grand total of 705 units of habitation had been completed and occupied, 15 temporary and 383 permanent dwellings provided by the Council and 307 by private enterprise. The dwellings built by the Council are made up as follows:-

11	4-bedroom houses
176	3-bedroom houses (including Warden's house)
30	2-bedroom flats) in Duplex houses
30	1-bedroom flats)
28	2-bedroom flats
4	1-bedroom flats
59	2-bedroom bungalows
31	1-bedroom bungalows
15	2-bedroom temporary bungalows
2	2-bedroom flats over shops
12	2-bedroom houses

POST WAR ACCOMMODATION.

	4-Bedroom Accommodation	3-Bedroom Accommodation	2-Bedroom Accommodation	1-Bedroom Accommodation
	11	176	146	65
Post War conversions (Fairland Flats)			2	4

For the information of the Council details of Pre-war Houses are as follows:-

4-Bedroom Accommodation		3-Bedroom Accommodation	2-Bedroom Accommodation
Houses	Flats		
4	2	226¤	30ø

ø Includes Council Offices Flat.
¤ Includes Manor House, Bridewell Street and Cemetery Lodge.
ø Includes 12 cottages, Rattle Row - Rose Cottage, Pople Street - 3 Cottages, Skippers Row - Glendale, Back Lane - and house occupied by Mr. Platten which had one bedroom converted into a bathroom.

New Housing Progress.

Speculative building proceeded at a steady pace during the year on three sites in the town. Fifty one houses were completed by private enterprise; the previous highest figure was in 1953 when 49 houses were erected. At the close of the year a further 71 were under construction.

The Council completed fourteen during the year and a further six were under construction on the 31st December 1964.

Total Housing Accommodation in the District.

At the 31st December 1964 the total number of dwellings in the urban area was 2179 including those occupied in connection with a business, i.e. shops, licensed premises, and hotels etc.

The total number of dwellings owned by the Council including sub-standard houses in temporary use was 666 which is equivalent to 30.56% of the total.

House Purchase & Housing Act 1959
Housing Act 1961 & 1964
Grants for Improving and Modernising Housing Accommodation.

(a) Pre-War Council Houses.

Eight pre-war Council Houses were modernised during the year by installing baths, lavatory basins, internal W.C's, new sinks and draining boards and hot water systems and at the end of the year work was in hand on a further fourty four houses at Preston Avenue.

Schemes already completed and those in hand total 109 houses, this leaves 130 pre-war houses still to be modernised.

(b) Privately Owned Houses.

During the year 14 houses were improved and modernised under the Housing Acts; Discretionary Grants 3, Standard Grants 11.

Discretionary Grants.

Year	Number of Houses Modernised or improved	Total Amount of Grants
		£. s. d.
1952	1	290. 0. 0.
1953	2	320. 16. 11.
1954	2	269. 6. 4.
1955	9	2421. 13. 0.
1956	14	2587. 12. 4.
1957	11	3101. 0. 0.
1958	10	2778. 0. 0.
1959	10	2549. 9. 6.
1960	8	2431. 0. 0.
1961	2	278. 10. 0.
1962	4	1020. 17. 0.
1963	6	2425. 19. 7.
1964	3	1189. 1. 9.
Total	82	£21663. 6. 5.

Average Grant per dwelling £264. 3.9d.

Standard Grants.

Year	Number of Houses Modernised or Improved	Total Amount of Grants
		£. s. d.
1959	1	105. 0. 0.
1960	3	247. 13. 2.
1961	8	746. 9. 6.
1962	6	593. 4. 11.
1963	16	1937. 14. 4.
1964	11	1226 17. 11.
Total	45	£4856. 19. 10.

Average Grant per dwelling £107.18.8d.

Grouped Homes for Old People.

The Grouped Homes Scheme at Standley Court continued to function smoothly and efficiently. The table gives an indication of the extent to which the services provided are made use of.

	1959	1960	1961	1962	1963	1964
Calls for assistance by alarm bells	28	18	21	29	34	11
Doctors called	31	23	35	47	28	15
General Assistance	96	38	185	151	214	345
General Assistance on instructions of G.P's.	14	4	22	23	3	10
Chimney Fires	2	2	-	-	-	-
Use of Visitors beds (number of nights)	17	30	7	26	7	5
Deaths	1	2	-	3	3	2
Marriages	1	-	-	-	-	-

Demand for New Houses.

The register of applications for Council Houses from persons residing or working within the Urban District showed 110 live applications as at the 31st December 1964. The details of these applications are set out below along with the figures for the previous four years.

	1960	1961	1962	1963	1964
Childless families	12	17	20	20	25
Families with 1 child	29	24	33	20	20
Families with 2 or more children	28	27	21	28	33
Old People requiring bungalows	29	35	41	42	37
Totals	98	103	115	110	115

Overcrowding.

	Housing Act Standard	Bedroom Standard
Cases remaining on register - 31.12.63	2	4
Cases reported 1.1.64 - 31.12.64	-	4
Cases abated 1.1.64 - 31.12.64		
(a) by action of Local Authority	-	-
(b) otherwise	1	-
Total remaining at 31.12.64.	1	8

WATER

Town Supply

The statutory supply area of the Urban Council's water undertaking is the whole of the Urban District and approximately 950 acres within the Rural District of Forehoe & Henstead. In addition about 31,000,000 gallons of water is supplied in bulk annually to the latter Rural District.

The total mileage of mains under the control of the Council is 25½ miles, which includes ½ mile of 3" main laid in Burnt House Lane during the year.

The pumping station is situated at Wicklewood in the Rural District of Forehoe & Henstead. The headworks comprise five 12" boreholes approximately 300 ft. in depth. Each borehole is capable of yielding 10,000 gallons per hour. The normal average rest level is 73'7" and the pumping level (at 8,000 g.p.H.) 93'6". The concrete reservoir has a capacity of 240,000 gallons, the top water level being 226ft. above ordnance datum. The water is softened, aerated and chlorinated. The capacity of the "Permutit" Base Exchange Softening Plant per regeneration was designed for 101,800 gallons of raw water with a hardness of 26.2° to be reduced to zero and giving an output of 139,000 gallons of blended water with a residual hardness of 7°. Chlorination of the water supply is by an automatic gas type instrument in phase with the pumps.

Softening Plant.

The efficiency of the softening plant continued to be a matter for concern and in July the Council decided to change the resin at a cost of approximately £1,170.

It was estimated that the saving in salt over twelve months would be at lease £1,322.

Acting on the advice of the Permutit Company the Council decided to acid wash the new resin at six monthly intervals.

The new resin was placed in the softening plant on the 21st and 22nd September and at the end of the year 31st December 1964 the output per regeneration was 135,000 gallons; the consumption of salt being approximately 40 lbs. per regeneration less than the original design figure.

Extension of Mains.

New mains were laid during the year as follows:-

From Silfield Street through Burnt House Lane	810 yds. 3" asbestos main.

Regrouping of Water Undertakings.

The Council gave consideration to a report of a meeting, attended by representatives of the Council, and held at the Shirehouse, Norwich on the 18th February 1964 and it was resolved to support in principle the recommendations that the requirements of the North and North West Group and Southern Group as proposed by the Minister of Housing and Local Government for the purpose of establishing a Water Board for each could best be served by a single group.

Distribution System.

Fractures in water mains occurred as follows during the year:-

3" mains - Bait Hill, Vimy Ridge and Ketts Close
4" mains - Wood Lane and Green Lane

Sampling.

A total of 25 samples of water was taken from various sections of the distribution system for bacterialogical examination and in each case the result was satisfactory.

In addition four samples were taken from private wells and bores.

Details of a full chemical analysis of the raw water is given on Folio 12 along with a summary of the Headworks weekly reports.

SEWAGE DISPOSAL AND SEWERAGE.

Sewage Disposal Works.

Your Medical Officer of Health has covered the problems and investigations carried out during the year at the Disposal Works.

Considerable time was devoted to the carrying out of investigations and the taking of numerous samples. Various possibilities for failure of the Biological Filters were discussed with the Consulting Engineers and Public Analyst and these were followed up; on one occasion the question of laundry wastes was referred to the Water Pollution Research Laboratory.

On the 4th November a River Board Official took statutory samples of the effluents and on the 7th December the Chairman of the Council, Chairman of the Public Health Committee and Officials of the Council (including Consulting Engineer) met representatives of the River Board to discuss the question of the unsatisfactory effluent. The result of this meeting was that the Council was requested to expedite the proposed remedial measures as the Board would be compelled to review the position in 4 months' time.

A member of a Firm of Consulting Chemical Engineers who were carrying out investigations for a neighbouring authority visited the works. He suggested a physical check of the works with special reference to the filters to see that they were draining properly and that there was no flooding.

Some of the media was removed from the beds and it was found that the floors of the filters were flooded and it seemed apparent that in the circumstances the ventilation of the filters would also be at fault.

At the close of the year the Council had instructed their Consulting Engineers to carry out work to remedy the faulty floor drainage and improve the ventilation of the filters.

Sewerage System.

The question of extending the sewerage system to serve properties, on cesspool drainage, in Greenland Avenue and Tuttles Lane received the further consideration of the Council. The Public Health Engineer's Department of the Norfolk County Council was invited to act as Consultants and prepare a scheme for sewering the area in question.

Cesspools.

Your Council has no scheme in operation for the emptying of cesspools; arrangements are made with the adjoining Rural District Council to empty cesspools when necessary; the owners of properties concerned paying the R.D.C. direct for the service.

Refuse Collection & Disposal.

The collection of household refuse is carried out by direct labour. One motor vehicle, a 12 cub. yd. "Karrier" continued to give good service.

Details of the areas covered by a collection service are as follows:

1. Weekly Collection of Household Refuse.

Norwich Road - as far as "Old Oak" Public House
Browick Road - as far as the Council Houses
Silfield Road - as far as Coll's Farm
London Road - including the 2 cottages near Longfields House.
Cavick Road - as far as "Johnson's" Farm
To the North of the Town, Tuttles Lane is roughly the limit of collection.

Number of bins emptied weekly - 1839

2. Fortnightly Collection - Dykebeck Road.

Number of Bins	22

3. Monthly Collection of Tins & Bottles Only.

Spooner Row/Suton area	179 bins
Silfield/Browick area	89 "
Downham area	51 "

Pail closets within the weekly collection area are emptied by the refuse collectors; the number is now 53.

The present rate of house building in the area is increasing the work of refuse collection. Sixty new houses in the year under review added half a load of refuse to the collection each week.

Trade and domestic refuse is disposed of at the Council's Strayground Lane tip. Controlled tipping is carried out as and when suitable and sufficient covering material is available.

FOOD & DRUGS ACT 1955.

Premises Registered under Sec.16.

Manufacture of sausages etc.	8
Manufacture of Ice Cream	NIL
Sale of Ice Cream	26

Ice Cream (Heat Treatment) Regulations 1947 - 1952.

There are no premises registered in the district for the manufacture of ice cream.

Twenty three samples of ice cream from Retailers were forwarded to the Public Health Laboratory. The results were as follows:-

Provisional Grade 1	22
" " 2	1

Milk & Dairies General Regulations 1959.

There are 3 traders in the Urban District registered under the above Act as Milk Distributors.

Part IV. Section 62.

There is one licensed Knackers Yard in the Urban District.

Food Hygiene Regulations.
Inspection & Supervision of Food.

Number of Food Premises in the Urban District.

Butchers Shops	7
Grocers Shops	24
Catering Establishments	5
Fishmongers Shops	3
Greengrocers Shops	7
Licensed Premises	16
Bakehouses	3
Fish and Chip Fryers	3

Regular visits of inspection have been made to food premises of all types during the year under review. The number of visits was 82.

The attention of seven traders had to be drawn, during the year, to the absence of "Now wash your Hands" notices in W.C.s.

Informal notices were served on two traders for not having nailbrushes available at wash basins, and on one trader for not having soap, nailbrush and an adequate supply of clean towels available.

Food Condemned.

The food set out in attached schedule was condemned and voluntarily surrendered during the year. The large increase in amount of food condemned is due to breakdowns in deep freeze cabinets.

No.	Item	No.	Item
6	Chicken Pies (Small)	4	Buttered Kipper Fillets
5	" " (Large)	6	" " "
5	Steak & Kidney Pies	4	Beefburgers
3	Haddock Filletts	1	Mixed Vegetables (Small)
3	Cod Filletts	4	Fish Fingers
15	Plaice "	6	Quarter Chickens
6	Haddock	4	Buttered Kipper Fitters (Small)
6	Cod	5	Sprouts
11	Beef Burgers	2	Fish Fingers
6	Beef Slices (Small)	2	Cod Steaks
6	" " (Large)	2	Chicken Pies
11	Fish Cakes	5	Steak & Kidney Pies
24	Beef Burgers	5	Puff Pastry
10	Kipper Fillets	1	Crinklecut Fried Chips (Large)
11	Steaklets (Small)	1	" " " (Small)
11	" (Large)	1	Skinless Sausages
12	Sprouts (Small)	1	Cod Filletts (Small)
12	" (Large)	1	" " (Large)
12	Broad Beans (Large)	1	Sliced Green Beans
12	" " (Small)	3	Cheeseburgers
8	Garden Peas (Large	2	Buttered Kipper Fillets
45	" " (Small)	3	Lemon Mousse
7	Peas	1	Yorkshire Pudding
10	Beans (Large)	2	Sweet Corn
9	" (Small)	2	Cod Steaks
10	Fish Fingers (Large)	2	Eclairs
20	" " (Small)	1	Beefburgers (Small)
30	" "	1	" (Large)
22	Steaks Cod (Small)	1	Steaklets
12	Cod Steaks (Large)	2	Chicken Pies

No.	Item
11	Fish Cakes
6	Chips (Large)
2	Chips (Small)
56	Garden Peas
8	Mint Peas
42½ lbs	Chickens
6½ lbs	Cooked leg of pork
2	Beefburgers
5	" (Small)
4	Peas & Carrots (Small)
6	Steaklets (Small)
6	" (Large)
4	Cod Fillets (Large)
6	" " (Small)
3	Plaice Fillets (Large)
1	" " (Small)
7	Sliced Green Beans (Large)
7	Brussels Sprouts (Small)
7	Cut Green Beans (Small)
6	Chicken Pies
4	Cod Steaks (Large)
6	Sliced Green Beans (Small)
4	Fish Fingers (Large)
1	Fried Potato Chips (Large)
3	" " " (Small)
3	Brussels Sprouts (Large)
3	Spinach
2	Cheeseburgers (Small)
3	Lemon Mousse
2	Fish Cakes
3	Salmon Fish Cakes
2	Chicklets
4	Steaklets (Large)
35	Hamburgers
8	Fish Fingers (Small)
3	Plaice Fillets
9	Cod Fillets (Large)
12	Fish Cakes
3	Cod Steaks (Small)
2	Haddock
5	Beef in Gravy (Small)
3	Plaice Fillets
3	Sliced Beans
11	Broad Beans
3	Beefburgers
4	Beefburgers
4	Fish Cakes
4	Broccold
5	Sweet Corn
20	Green Peas
14	Garden Peas
7	Brussels Sprouts
5	Mixed Veg.
2	Puff Pastry
1	Quarter Chicken
7	Chicken (Small)
4 lbs.	Chopped Pork
3	1lb.4⅓oz Beans
1	15½ oz.Cherries
1	8oz. Tomatoes
1	7½oz Butter Beans
1	1lb.3oz. Peas

No.	Item
4	Steak & Kidney Pies
1	Leaf Spinach
1	Young's Prawns
2	Felix Prawns
1	Crab Meat
2	Fish Fingers
7	Raspberry Mousse
1	Fresh Cream Sponge
4	SlicedGreen Beans
6	" " "
18	Fish Fingers (Small)
16	Garden Peas (Small)
14	Chocolate
28	Raspberry
1	3 lb.2oz. Chicken
2	" " "
2	2lb.6oz. "
1	1lb.13oz.Fruit Cocktail
1	" " Apricot
2	" " Pears
2	1lb.12oz. Pine Pieces
2	15½oz.Peaches Sliced
2	" " "
2	" " "
2	" Pine Pieces
1	8oz. Tomatoes
1	12oz. Pineapple
1	1lb. 3oz. Rhubarb
1	1lb.13oz. Peaches
1	" " "
1	15½oz. Cream Rice
1	8oz. Baked Beans
1	6lbs. Corned Beef
15	Fish Fingers (Med.)
12	" " (Large)
3	Cod Fillets (Small)
2	Chicken Pies
11	Cod Steaks (Large)
5	Chips
12	Beef in Gravy
7	Cheeseburgers
3	Smoked Haddock
8	Garden Peas
6	Steaklets
3	Steaklers
5	Chicklets
4	Puff Pastry
5	Spinach
7	Cutbeans
6	Mixed Veg.
9	Sliced Beans
5	Brussels Sprouts (Small)
4	Chips
7	Quarter Chicken
2	Eclairs
3	Chicken (Large)
3	8Oz. Pilchards
1	15½oz. Peaches
1	13½ oz. Cherries
1	11oz. Sweet Corn
1	15oz. Casserole Steak
1	10½oz. Soap

The Animal Boarding Establishment Act 1963.

The premises known as No.54 The Lizard, Wymondham are licensed as an animal Boarding Establishment.

The Agricultural (Safety, Health & Welfare Provisions) Act, 1956.

Two inspections were made in connection with fruit picking. Latrine accommodation was satisfactory and no action was necessary.

Factories.

The following table gives details of the number of factories in the district together with notices served to remedy defects found in the course of inspection of the various premises.

	Number on Register	Number of		
		Inspections	Written Notices	Occupiers prosecuted
(i) Factories in which Sections 1,2,3,4, & 6 are to be enforced by Local Authorities	-	-	-	-
(ii) Factories not included in (i) in which section 7 is enforced by the Local Authority	58	18	-	-
(iii) Other premises in which Section 7 is enforced by the Local Authority (excluding out-workers' premises)	27	347	-	-
Total	85	365	-	-

	Number of cases in which defects were found				Number of cases in which prosecutions were instituted
	Found	Remedied	Referred To H.M. Inspector	Referred By H.M. Inspector	
Want of Cleanliness (S.1.)	-	-	-	-	-
Overcrowding (S.2.)	-	-	-	-	-
Unreasonable temperature (S.3.)	-	-	-	-	-
Inadequate ventilation (S.4.)	-	-	-	-	-
Ineffective drainage of floors (S.6.)	-	-	-	-	-
Sanitary Conveniences (S.7.)					
(a) Insufficient	7	7	-	-	-
(b) Unsuitable or defective	-	-	-	-	-
(c) Not separate for sexes	-	-	-	-	-
Other offences against the Act (not including offences relating to outwork)	-	-	-	-	-
Total	7	7	-	-	-

The number of outworkers employed by Messrs. Co-operative Wholesale Society Ltd. included on the August List required by Section 133 (I) (c) was 5.

The Offices, Shops and Railway Premises Act 1963.

This Act came into operation during the year under review and on the 31st December 1964 the number of registrations had been as follows:-

	Registrations	Number of persons employed
Offices	21	67
Retail Shops	48	209
Catering Establishments	2	10
Fuel Storage Depots	2	10

Inspection of the District.

The following inspections were carried out by the staff of your Surveyor and Public Health Inspector's Department.

Private Housing including Grant Schemes	670
Council Modernisation Schemes	69
New Council Houses	184
Public Health excluding Food Hygiene Regulations ...	393
Food Hygiene Regulations	82

Rodent Control.

One of the Council's employees attended a Ministry of Agriculture, Fisheries & Food course on Rodent Control and has since February 1963 carried out his duties in a satisfactory manner.

Set out below is a copy of the report made to the Ministry of Agriculture, Fisheries & Food on the performance of the Council's functions under the provisions of the Prevention of Damage by Pests Act, 1949.

	Type of Property				
		Non-agricultural			
	L.A.	Dwelling-House	Business	Total of Cols.(1) (2) & (3)	Agricultural
Number of properties in L.A.'s District	8	2001	344	2353	70
Number of properties inspected as a result of notification	3	104	7	114	-
Number of properties found to be infested by:					
Common rat (Major	2	32	6	40	-
(Minor	1	71	1	73	-
Mice (Major	-	1	-	1	-
(Minor	-	-	-	-	-
Number of properties inspected in the course of survey under the Act	5	1042	9	1056	-
Number of such properties found to be infested by:					
Common rat (Major	-	315	-	315	-
(Minor	-	203	-	203	-
Total number of properties otherwise inspected	8	957	79	1044	27
Number of such properties found to be infested by					
Common rat (Major	-	2	-	2	-
(Minor	-	6	-	6	-
Number of infested properties (in Sections II,III & IV) treated by the L.A.	3	630	7	640	-

Summary of Water Officer's Weekly Reports for the year ended 31st December 1964

Total gallons pumped during year	139,757,000
Zero Softened Water	84,351,000
Blended Water	50,639,000
Rinsing Water) Washing Water) Prolonged Wash)	4,767,000

Salt consumed during the year: 426 tons 3 cwts.

Consumption:

Bulk supply to Forehoe & Henstead R.D.C. ...	30,679,500 gals.
Wymondham,Morley,Spooner Row and Suton	104,310,500 gals.
Average daily consumption of Forehoe & Henstead R.D.C.	84,053 gals.
Average daily consumption of Wymondham etc. ...	285,782 gals.

I have the honour to be
Your obedient Servant

K.F. Hudson
M.A.P.H.I.

Certificate of Analysis of Water

Sample received from the Wymondham Urban District Council.

Marked: Public Supply, High Oak, Wicklewood, Wymondham.

Appearance when received: Clear, yellow deposit.

Nature of Deposit: Iron compounds

Colour: Yellow Odour: Nil

Reaction: Neutral pH 7.1 Taste: Satisfactory

Results of Chemical Analysis in Parts per million

Ammoniacal Nitrogen	0.04
Albuminoid Nitrogen	0.01
Nitrate Nitrogen	1.5
Nitrite Nitrogen	0.012
Chloride as Cl	22
Permanganate Value (4 hr.)	0.25

Hardness as $CaCO_3$:	
Total	350
Carbonate (temporary)	310
Non-carbonate (Permanent)	40
Alkalinity as $CaCO_3$	310
Free carbon dioxide	68
Total solids (at 180° C.)	440
Iron (total)	0.7
Metals in solution	nil

Opinion

The organic quality of this water is good and there is no chemical evidence of pollution. This water was last analysed in January 1963 (our certificate P.403) and its analytical characteristics have hardly altered since then. The total hardness of the water is about 25° Clark, almost all of which is temporary. There is a trace of iron present, which needs to be removed because otherwise it would be a nuisance to consumers. With this reservation, this water is in our opinion suitable for use as a public supply.

Mineral Analysis

	Parts per Million
Calcium as Ca	132
Magnesium as Mg	4
Sodium as Na	26
Carbonate as CO_3	186
Chloride as Cl	22
Sulphate as SO_4	30
Nitrate as NO_3	7
Iron as Fe	0.7
Fluorine as F	0.05
Silica as SiO_2	16